Technical Data Sheet

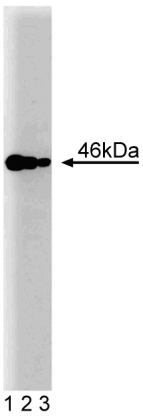
Purified Mouse Anti-IAK1

Product Information

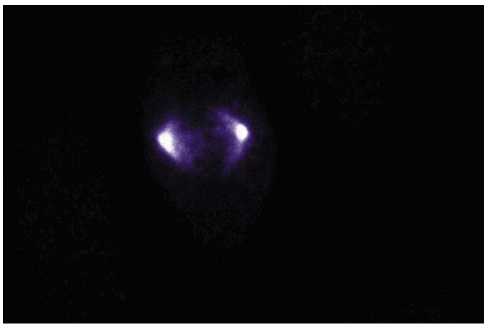
Material Number:	**610938**
Alternate Name:	Aurora-A Kinase
Size:	50 µg
Concentration:	250 µg/ml
Clone:	4/IAK1
Immunogen:	Mouse IAK1 aa. 8-116
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Rat, Mouse
Target MW:	46 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Cell division is a tightly regulated process that ensures the segregation of chromosomes into daughter cells. Essential to this regulation is the modification of cell cycle components by reversible phosphorylation. Ipl1 and aurora are two related kinases isolated from S.cerevisiae and Drosophila, respectively. Inactivation of these kinases results in abnormal chromosome segregation and disruption of the centrosome. A structurally and functionally similar kinase, IAK1 (Ipl1- and Aurora-related kinase 1), is a regulator of mammalian chromosome segregation. Although IAK1 may be present in the cytoplasm, it is detected on the centrosome following duplication and also associates with the spindle microtubules from metaphase through cell division. Expression of IAK1 is stringently regulated during the cell cycle. Both mRNA and protein are initially expressed in S-phase, are elevated during M-phase, and are undetectable following completion of mitosis. Increasing evidence suggests that IAK1 belongs to a novel subfamily of the ser/thr kinase superfamily. Although mutational analysis of IAK1 will directly determine its function, it appears to be a key player in the control of cell division.



Western blot analysis of IAK1 on a Jurkat cell lysate (Human T-cell leukemia; ATCC TIB-152). *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the mouse anti-IAK1 antibody.*



Immunofluorescence staining of human endothelial cells.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Suggested Companion Products

Catalog Number	Name	Size	Clone
611451	Jurkat Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

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Katayama H, Ota T, Jisaki F. Mitotic kinase expression and colorectal cancer progression. *J Natl Cancer Inst.* 1999; 91(13):1160-1162.(Biology: Western blot)

Kiat LS, Hui KM, Gopalan G. Aurora-A kinase interacting protein (AIP), a novel negative regulator of human Aurora-A kinase. *J Biol Chem.* 2002; 277(47):4558-45565.(Biology: Western blot)

Sakai H, Urano T, Ookata K. MBD3 and HDAC1, two components of the NuRD complex, are localized at Aurora-A-positive centrosomes in M phase. *J Biol Chem.* 2002; 277(50):48714-48723.(Biology: Immunofluorescence)